



DECLARATION UNDER 37 CFR 1.132

I, Robert D. Herpst, hereby declare as follows:

1. I am the inventor of the invention described in U.S. Patent application 09/977,664 of Robert D. Herpst and I am therefore familiar with the content of that application (hereinafter the "Herpst Application"). I am also the Managing Director and Chairman of the Board of International Crystal Laboratories ("ICL").

2. ICL has manufactured spectroscopy sampling accessories and optics for spectroscopy since 1962. I have been the Chairman of the Board of ICL since 1982. International Crystal Laboratories has manufactured the invention described in claims 1 and 18 of the Herpst Application since 2002 under a license agreement between ICL and me.

3. Unit sales of the invention described in claims 1 and 15 of the Herpst Application have grown from the 2002 base year, as follows:

2002: 7030 units
2003: 10540 units
2004: 13855 units
2005: 14625 units through October 31, 2005
2005: 17550 units (annualized to December 31, 2005 based on
actual sales through 10 months ended 10/31/05)

4. The growth rates in unit sales of the invention described in claims 1 and --
- of the Herpst Application on an annual basis have been as follows:

2002: Base Year
2003: 49.93%
2004: 36.95%
2005: 26.67% (annualized through 12/31/05 based on
actual sales through 10 months ended 10/31/05)

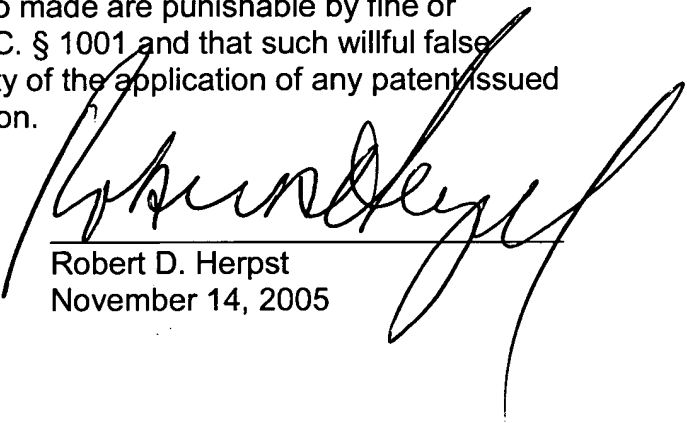
5. The projected average annual compound unit growth rate for the period ended December 31, 2005 (based on actual sales from January 1, 2002 through October 31, 2005) is 36.02% per year.

6. I am familiar with the market for spectrophotometer sampling accessories and devices, which is a business that ICL has been active in for over 43 years and which I have been active in since 1982 as an officer of ICL. The magnitude of the sales of this product and its growth rate are indicative of a commercially successful product in this market (spectrophotometer sampling accessories and

devices). ICL also licenses the product disclosed in the Gagnon patents (US Patents No. 5,470,757 & 5,764,355), which are known generically in the marketplace as "3M cards". In my opinion, the unit sales of the invention disclosed in the Herpst Application equal or exceeds in the unit sales volume the of 3M cards in the comparable first 4 years of production of those products. Furthermore, the dollar volume of sales of the invention disclosed in the Herpst Application now exceeds the dollar volume of licensee sales of "3M cards" as disclosed in the Gagnon patents.

7. In my opinion, based upon conversations with customers who use the invention disclosed in the Herpst Application, the commercial success of the invention disclosed in the Herpst Application is attributable to several of the unique properties of the invention, which include, among other things, that: (i) the product provides a sample support substrate that does not materially absorb infrared energy, (ii) the product provides a sample substrate does not require special storage or handling to protect it from humidity effects, (iii) the product is inexpensive, (iv) the product is disposable and therefore does not require cleaning and (v) the product is self contained and easily mounted in a spectrophotometer.

I hereby declare that all statements made herein of my own knowledge are true and correct and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under 18 U.S.C. § 1001 and that such willful false statements may jeopardize the validity of the application of any patent issued under the above referenced application.



Robert D. Herpst
November 14, 2005



DECLARATION UNDER 37 CFR 1.132

I, Dr. Edward M. Smolyarenko, hereby declare as follows:

1. I have been an optical materials scientist for over 40 years. I have a Ph.D. in materials science from the Institute of Solid State Physics and Semiconductors, Minsk Belarus (1962) where I was a Research Scientist and latter a Senior Research Scientist from 1962 to 1989. I was a Senior Research Scientist at Inrad, Inc. from 1990 to 1992. I was Director of Crystal Technology at International Crystal Laboratories ("ICL") from 1992 to 2003 and I have consulted with ICL on a part time basis since 2003. I hold 5 Soviet patents and have written dozens of articles, all of which deal with optical materials and crystal growth. I have extensive experience with optics and optical devices. A list of my patents and of some of my journal articles is attached. In my professional capacity I have been intimately familiar with the means of, and requirements for, processing optics for use in optical devices of all kinds.
2. I have read and studied U.S. Patent application 09/977,664 of Robert D. Herpst and I am therefore familiar with the content of that application (hereinafter the "Herpst Application").
3. I have reviewed and understand all of the claims of the Herpst Application.
4. As to claim 1 of the Herpst Application, I understand that a finished product, a sample holder, is claimed for use with an infrared spectrophotometer that has a throughbore and an infrared light transmitting support substrate located in that throughbore that allows the infrared light too pass through the substrate and no other material is present in that throughbore that would substantially absorb the infrared light and where the substrate is formed by one or more of the steps of cleaving, fly cutting, chipping, milling, sawing or scaling and the finished substrate is not precision optically polished.
5. It is my opinion, that it would be unexpected for one skilled in the art of optics or optical materials to be able to construct a finished product in the form of a sample holder for an infrared spectrophotometer or infrared filtometer in accordance with the steps and recited features of that claim.
6. In my opinion, the same is true of claim 18 that is a method for the manufacture of a sample holder for use in an infrared spectrophotometer or infrared filtometer, and, again, a final product sample holder is achieved in a manner that is unexpected to me and I believe to those skilled in the art of optics or optical materials.

7. Since the same limitation or descriptions that I consider to result in the unexpected result discussed above are also present in later independent claims 30, 39, 45, 46, 47 and 53, it is my opinion that those claims describe an invention that achieves unexpected results.

8. In the field of optics and optical materials, it is well known that optics have been precision polished for virtually every application in they have been used as components of optical products or optical device, including those optical devices used in spectroscopy for sample analysis. Use in a spectroscopic sampling device of an optic formed merely by cleaving, fly cutting, chipping, milling, sawing or scaling without precision optically polished is therefore an unexpected result to those skilled in the art.

I hereby declare that all statements made herein of my own knowledge are true and correct and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under 18 U.S.C. § 1001 and that such willful false statements may jeopardize the validity of the application of any patent issued under the above referenced application.

E Smolyarenko

Edward M. Smolyarenko

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"Thermodynamic Properties of Solid Solutions $(\text{Zn}_x\text{Cd}_{1-x})_3\text{P}_2$ " E. Smolyarenko and V. Trukhan, *Inorganic Materials* **22** (9) (1986).

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PATENTS

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Production technique for single crystals of cadmium diphosphide - with L.K. Orlik et al., 1984

Production technique for solid solutions Zn_3P_2 - Cd_3P_2

Production technique for tetragonal modification of single crystals of zinc diphosphide - with V.M. Trukhan et al., 1979

Semiconductor switch - with A.A. Andreev et al., 1978

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